

# OBSERVATIONAL STUDY IN THE USE OF AMPICILLIN SODIUM INJECTION IN THE MANAGEMENT OF CERVICAL DYSTOCIA AND SHORTENING OF LABOR.

Mercy Bantia\*

*Mildmay Institute of Health Sciences.*

---

**Keywords:** Use of Ampicillin, Sodium Injection, Management of Cervical Dystocia, Shortening of Labor, Submitted: 2023-05-15 Accepted: 2023-05-19

---

## 1. Background.

Cervical dystocia is the failure of the cervix to dilate despite good uterine contractions. On vaginal examination, it would feel like a rigid, thick, and swollen cervix. It could appear as dystocia of the anterior cervical lip or the entire cervix. Cervical dystocia usually occurs in women in whom excessive pressure of the presenting part is exerted on the cervix this is especially noted in women who start pushing early before full cervical dilatation due to excessive uterine contractions as a result of the use of herbal drugs, argumentation using oxytocin infusion or induced using high levels of prostaglandin or those with prolonged labor. Cervical dystocia is one of the causes of prolonged labor and obstructed labor which eventually contributes to fetal distress, maternal exhaustion, cervical tear, and one of the causes of cesarean section (Nystedt A. et al, 2014).

Ampicillin sodium is a broad spectrum antibiotic equivalent to 10 grams of ampicillin and has a sodium content of 658.3 mg per 10 grams of ampicillin (Pfizer, 2010). used in the management of preterm labor as a prophylaxis against infection, it is also used in the management of premature rupture of membranes, pre-labor preterm rupture of membranes, and pre-surgical antibiotic prophylaxis.

There is no data owing to its use in managing cervical dystocia and shortening labor.

Many drugs including drotaverine and Hyoscine Butyl Bromide have been used in shortening labor by aiding cervical effacement and dilatation and reducing pain in labor due to their antispasmodic effects (Riemma G. et al, 2020) these are antispasmodic and anticholinergic drugs, that act by binding to and blocking muscarinic receptors located on parasympathetic nerve endings and smooth muscles (Sørbye IK, et al .2022).

Studies in guinea pigs indicated that intravenous administration of ampicillin slightly decreased the uterine tone and frequency of contractions, but moderately increased the height and duration of contractions (Pfizer 2010). However, there are no studies in humans thus this study revealed the use of ampicillin sodium injection given in the management of cervical dystocia and shortening of the duration of labor.

## 2. Methodology.

This study employed a qualitative observational study involving ten (10) midwives and sixty (60) mothers in active labor in the labor suite at Kawempe National Referral Hospital. This study was carried out between (15th January 2021 and 27th May 2022) during which midwives on duty in the labor ward who were observed using ampicillin sodium injection administered bolus on mothers

---

\* Corresponding author.

Email address: [bantiamearcy@gmail.com](mailto:bantiamearcy@gmail.com) (Mercy Bantia)

Rosseland LA, Lukasse M, Gunnes N, Michelsen

in active labor and purposively recruited in the study. Data was collected via face-to-face interactions, and using an interview guide. Data were analyzed descriptively.

### **3. Results.**

(see table 1)

### **4. Conclusion.**

Injectable ampicillin sodium resolves cervical dystocia and shortens the length of labor hence improving outcomes of labor. Outcomes are better when the drug is administered bolus than through intravenous fluids. Its action is independent of parity of the mother. There were no noted undesirable side effects of the drug on all the mothers.

### **5. Recommendation.**

Unlike other antispasmodic drugs, the mechanism by which ampicillin sodium injection given bolus improves effacement enhances dilatation of the cervix, and shortens the length of labor was not defined hence the need for more advanced research.

### **6. References.**

1) Nystedt A, Hildingsson I. Diverse definitions of prolonged labour and its consequences with sometimes subsequent inappropriate treatment. *BMC Pregnancy & Childbirth.* 2014; 14:233. <https://doi.org/10.1186/1471-2393-14-233> PMID: 25031035

2) Riemma G, La Verde M, Schiattarella A, Co-bellis L, De Franciscis P, Colacurci N, Morlando M. Efficacy of hyoscine butyl-bromide in shortening the active phase of labor: Systematic review and meta-analysis of randomized trials. *Eur J Obstet Gynecol Reprod Biol.* 2020 Sep <https://doi.org/10.1016/j.ejogrb.2020.06.042> PMID: 32629224 252:218-224. doi: 10.1016/j.ejogrb.2020.06.042. Epub 2020 Jun 23. PMID: 32629224

3) Sørbye IK, Gaudernack LC, Einarsen A,

TM Study protocol for the BUSCopan in LABor (BUSCLAB) study: A randomized placebo-controlled trial investigating the effect of butylscopolamine bromide to prevent prolonged labor PLoS One. 2022 Nov 3https:

//doi.org/10.1371/journal.pone.0276613PMid:36327275  
PMCID:PMC9632812  
17(11):e0276613.

doi: 10.1371/journal.pone.0276613. e Collection 2022.PMID: 36327275https://doi.org/10.1371/journal.pone.0276613PMid:36327275 PMCID:PMC9632812

## 7. Publisher details

### Author biography

**Mercy Bantia** Health Tutor (BMED), Midwife (RM)

**Publisher: Student's Journal of Health Research (SJHR)**  
**(ISSN 2709-9997) Online**  
**Category: Non-Governmental & Non-profit Organization**  
**Email: [studentsjournal2020@gmail.com](mailto:studentsjournal2020@gmail.com)**  
**WhatsApp: +256775434261**  
**Location: Wisdom Centre, P.O.BOX. 148, Uganda, East Africa.**



Table 1: **Results**

<b>Information assessed</b>	<b>Demographic data</b>	<b>Findings</b>
	Years of experience in laboursuit	<b>2</b>
	• less than five years	<b>8</b>
	• More than 5years	
<b>Use of injectable ampicillin sodium</b>		
Is the use of injectable ampicillin sodium in managing labor as a routine?		All participants agreed that ampicillin sodium was not a routine use in managing labor.
When did you start using intravenous ampicillin in managing cervical dystocia and shortening labor?		Majority (9) midwives reported that they have always used the drug. All the midwives could ably describe cervical dystocia.
How do you diagnose cervical dystocia		All mothers in active labor diagnosed with cervical dystocia. Usually one gram (1g) was enough for a prime gravida and a maximum of two grams (2g) in high parity.
Who qualifies to receive injectable ampicillin sodium in labor?		All midwives agreed that a bolus intravenous injection provided better results than one administered through an intravenous fluid.
How many milligrams of the drug do you use in each case? How did you administer the drug?		All the midwives could not explain the means by which the drug improved state of the cervix and shorted labor.
How does the drug achieve this action?		All midwives reported not having observed any undesirable effect, however they agreed that being an antibiotic it could have had more advantages.
Did you notice any undesirable effects of the drug the mothers?		